

IN THE CLAIMS:

1. (previously presented) An alkaline pH, free solution capillary electrophoresis process for analyzing a human biological sample comprising serum protein constituents including albumin and at least one other constituent selected from α_1 -globulin, α_2 -globulin, β -globulin, β_1 -globulin, β_2 -globulin and γ -globulin, said method comprising: introducing the human biological sample into a capillary tube containing a buffer system, wherein said buffer system comprises a buffer and at least one additive having a hydrophobic interaction with said albumin constituent and providing said albumin constituent with at least one negative charge thereby reducing the electrophoretic mobility of said albumin.

2. (previously presented) The method of claim 1, which further comprises separating said protein constituents by migrating and detecting said constituents.

3. (canceled)

4. (previously presented) The method of claim 1, wherein the sample is serum, hemolyzed blood, plasma, urine or cerebrospinal fluid.

5. (previously presented) The method of claim 1, wherein said constituents are serum proteins.

6. (canceled)

7. (original) The method of claim 1, wherein said at least one additive comprises an anionic pole with a pH of more than 9 and a hydrophobic portion.

8. (previously presented) The method of claim 1, wherein said additive comprises a hydrophobic portion composed of at least one linear or non linear alkyl chain containing 4 to 22 carbon atoms, and/or at least a combination of 1 to 10 aromatic or non-aromatic cycles, and an anionic pole constituted

by one or more groups selected from sulphonates, carboxylates, sulphates, phosphates and carbonates.

9. (previously presented) The method of claim 1, wherein said additive is selected from cholates, C_6 to C_{22} alkylmono-, di- or tri-sulphonates, tetradecenesulphonate, naphthalenesulphonates, C_6 to C_{22} alkylmono-, di- or tri-carboxylates, C_6 to C_{22} alkylcarboxysulphonates, naphthalenecarboxylates, C_4 to C_{14} alkylsulphates, C_4 to C_{14} alkylcarbonates, benzenesulphonates and benzenecarboxylates.

10. (original) The method of claim 1, wherein said additive is a C_6 to C_{10} alkylsulphonate.

11. (original) The method of claim 1, wherein said additive is octanesulphonate.

12. (original) The method of claim 1, wherein said additive has a concentration in said buffer system in the range of 0.1 mM to 500 mM.

13. (original) The method of claim 12, wherein said additive in said buffer system does not exceed the critical micellar concentration of said additive in said buffer.

14. (original) The method of claim 1, wherein said additive has a concentration in the range of 1 mM to 4 mM in said buffer system.

15. (previously presented) The method of claim 1, wherein said additive has a concentration of about 2.5 mM in the buffer system.

16. (previously presented) The method of claim 1, wherein said buffer system has a pH in the range of 9 to 11.

17. (original) The method of claim 1, wherein the capillary tube is fused silica.

18. (original) The method of claim 1, wherein said buffer system further comprises at least one pH-modifying agent.

19. (previously presented) The method of claim 18, wherein the pH-modifying agent is selected from lithium hydroxide, sodium hydroxide, potassium hydroxide, rubidium hydroxide, cesium hydroxide, francium hydroxide, or a mono-, di-, tri- or tetra-alkyl ammonium hydroxide containing 1 to 8 carbon atoms in the alkyl portion.

20. (previously presented) A method for separating protein constituents in a human biological sample comprising albumin and at least one serum protein selected from α_1 -globulin, α_2 -globulin, β -globulin, β_1 -globulin, β_2 -globulin and γ -globulin, said method comprising passing said serum protein constituents into a capillary containing a buffer system comprising at least one buffer and at least one additive having a hydrophobic interaction with human albumin, wherein the electrophoretic mobility of said albumin is reduced.

21. (currently amended) A method for separating protein constituents in a human biological sample comprising albumin and at least one serum protein selected from α_1 -globulin, α_2 -globulin, β -globulin, β_1 -globulin, β_2 -globulin and γ -globulin said method comprising passing said serum protein constituents into a capillary containing a buffer system comprising at least one buffer and at least one additive, wherein said additive is a compound comprising an anionic pole with a pH of more than 9 and a hydrophobic portion, wherein said additive reduces the electrophoretic mobility of said albumin .

22. (original) The method according to claim 1 or 20 or 21, wherein said buffer system further comprises sodium sulphate.

23. (original) The method according to claim 1, wherein said additive is a zwitterionic biological buffer.

24. (currently amended) A solution of a buffer system for capillary electrophoresis, ~~which comprises in a liquid~~

~~support~~ comprising at least one buffer and an additive selected from cholates, linear C₆ to C₂₂ alkyl-mono-, di- or tri-sulphonates, tetradecenesulphonate, naphthalenesulphonates, C₆ to C₂₂ alkylmono-, di- or tri-carboxylates, C₆ to C₂₂ alkylcarboxysulphonates, naphthalenecarboxylates, C₄ to C₁₄ alkylsulphates, C₄ to C₁₄ alkylcarbonates, benzenesulphonates, and benzenecarboxylates that has a hydrophobic interaction with human albumin, said buffer system having a pH between 9 and 11.

25. (previously presented) The solution of claim 24, wherein said additive is a linear C₆ to C₂₂ alkyl-mono-, di- or tri-sulphonate, said buffer having a pH of between 9 and 11.

26. (canceled)

27. (previously presented) The solution of claim 24, wherein the additive is a linear C₆ to C₁₀ alkylsulphonate.

28. (previously presented) The solution of claim 24, wherein said additive is octanesulphonate.

29. (previously presented) The solution of claim 25, wherein the additive is a linear C₆ to C₁₀ alkylsulphonate.

30. (previously presented) The solution of claim 25, wherein said additive is octanesulphonate.

31. (canceled)

32. (canceled)

33. (canceled)

34. (previously presented) The method of claim 1, wherein said additive is a linear C₆-C₁₀-alkylsulphonate.

35. (previously presented) The method of claim 1, wherein said additive is n-octylsulphonate.

36. (new) An alkaline pH, free solution capillary electrophoresis process for analyzing a human biological sample comprising serum protein constituents including albumin and at least one other constituent selected from α_1 -globulin,

α_2 -globulin, β -globulin, β_1 -globulin, β_2 -globulin and γ -globulin, said method comprising:

introducing the human biological sample into a capillary tube containing a buffer system wherein said buffer system has a pH in the range of 9 to 11 and wherein said buffer system comprises a buffer and at least one additive selected from cholates, C_6 to C_{22} alkyl-mono-, di- or tri-sulphonates, tetradecenesulphonate, naphthalenesulphonates, C_6 to C_{22} alkylmono-, di- or tri-carboxylates, C_6 to C_{22} alkylcarboxysulphonates, naphthalenecarboxylates, C_4 to C_{14} alkylsulphates, C_4 to C_{14} alkylcarbonates, benzenesulphonates and benzenecarboxylates and having a hydrophobic interaction with said albumin constituent and providing said albumin constituent with at least one negative charge thereby reducing the electrophoretic mobility of said albumin.

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In the event any fee is due in connection with the present response, the Examiner is authorized to charge Applicant's Deposit Account No. 12-1095 therefor.

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Respectfully submitted,

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